

**WAVELENGTH ROUTER WITH A TRANSMISSIVE DISPERSIVE  
ELEMENT**

**ABSTRACT OF THE DISCLOSURE**

A wavelength router is provided that selectively directs spectral bands between an input port and a set of output ports. The router includes a free-space optical train disposed between the input port and the output ports. The free-space optical train may include air-spaced elements or may be of generally monolithic construction. The optical train includes a transmissive dispersive element, such as a transmissive diffraction grating, disposed so that light is intercepted from the input port and encounters the transmissive dispersive element at least four times before reaching any of the output ports.

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